

# EMC TEST REPORT



Report No.: 15070341-FCC-E

Supersede Report No.: N/A

Applicant	Social Mobile Telecommunications	
Product Name	PHONE	
Model No.	X401	
Serial No.	Flow 3G	
Test Standard	FCC Part 15 Subpart B Class B:2014, ANSI C63.4: 2014	
Test Date	May 12 to May 23, 2015	
Issue Date	May 25, 2015	
Test Result	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	
Equipment complied with the specification <input checked="" type="checkbox"/>		
Equipment did not comply with the specification <input type="checkbox"/>		
Lucifer He	Chris You	
Lucifer He Test Engineer	Chris You Checked By	
This test report may be reproduced in full only		
Test result presented in this test report is applicable to the tested sample only		

Issued by:

**SIEMIC (SHENZHEN-CHINA) LABORATORIES**

Zone A, Floor 1, Building 2 Wan Ye Long Technology Park

South Side of Zhoushi Road, Bao'an District, Shenzhen, Guangdong China 518108

Phone: +86 0755 2601 4629801 Email: [China@siemic.com.cn](mailto:China@siemic.com.cn)

## Laboratories Introduction

SIEMIC, headquartered in the heart of Silicon Valley, with superior facilities in US and Asia, is one of the leading independent testing and certification facilities providing customers with one-stop shop services for Compliance Testing and Global Certifications.



In addition to testing and certification, SIEMIC provides initial design reviews and compliance management throughout a project. Our extensive experience with China, Asia Pacific, North America, European, and International compliance requirements, assures the fastest, most cost effective way to attain regulatory compliance for the global markets.

### Accreditations for Conformity Assessment

Country/Region	Scope
USA	EMC, RF/Wireless, SAR, Telecom
Canada	EMC, RF/Wireless, SAR, Telecom
Taiwan	EMC, RF, Telecom, SAR, Safety
Hong Kong	RF/Wireless, SAR, Telecom
Australia	EMC, RF, Telecom, SAR, Safety
Korea	EMI, EMS, RF, SAR, Telecom, Safety
Japan	EMI, RF/Wireless, SAR, Telecom
Singapore	EMC, RF, SAR, Telecom
Europe	EMC, RF, SAR, Telecom, Safety

Test Report	15070341-FCC-E
Page	3 of 27

This page has been left blank intentionally.

## CONTENTS

1. REPORT REVISION HISTORY .....	5
2. CUSTOMER INFORMATION .....	5
3. TEST SITE INFORMATION.....	5
4. EQUIPMENT UNDER TEST (EUT) INFORMATION .....	6
5. TEST SUMMARY .....	8
6. MEASUREMENTS, EXAMINATION AND DERIVED RESULTS .....	9
6.1 AC POWER LINE CONDUCTED EMISSIONS.....	9
6.2 RADIATED EMISSIONS .....	13
ANNEX A. TEST INSTRUMENT.....	17
ANNEX B. EUT AND TEST SETUP PHOTOGRAPHS.....	18
ANNEX C. TEST SETUP AND SUPPORTING EQUIPMENT.....	23
ANNEX D. USER MANUAL / BLOCK DIAGRAM / SCHEMATICS / PARTLIST .....	26
ANNEX E. DECLARATION OF SIMILARITY .....	27

## 1. Report Revision History

Report No.	Report Version	Description	Issue Date
15070341-FCC-E	NONE	Original	May 25, 2015

## 2. Customer information

Applicant Name	Social Mobile Telecommunications
Applicant Add	16400 NW 2nd Ave. #201 Miami, Florida 33169
Manufacturer	SMT TELECOMM HK LIMITED
Manufacturer Add	Unit C 8/F, CHARMHILL CTR 50 HILLWOOD RD TST KL

## 3. Test site information

Lab performing tests	SIEMIC (Shenzhen-China) LABORATORIES
Lab Address	Zone A, Floor 1, Building 2 Wan Ye Long Technology Park South Side of Zhoushi Road, Bao' an District, Shenzhen, Guangdong China 518108
FCC Test Site No.	718246
IC Test Site No.	4842E-1
Test Software	Radiated Emission Program-To Shenzhen v2.0

## 4. Equipment under Test (EUT) Information

Description of EUT: PHONE

Main Model: X401

Serial Model: Flow 3G

Date EUT received: May 11, 2015

Test Date(s): May 12 to May 23, 2015

Equipment Category : JBP

GSM850: -0.4 dBi

PCS1900: 0.5 dBi

Antenna Gain: UMTS-FDD Band V: -0.4dBi

UMTS-FDD Band II: 0.5dBi

Bluetooth/BLE: 0.4dBi

WIFI: 0.4 dBi

GSM / GPRS: GMSK

EGPRS: GMSK, 8PSK

Type of Modulation: UMTS-FDD: QPSK, 16QAM

802.11b/g/n: DSSS, OFDM

Bluetooth: GFSK, π /4DQPSK, 8DPSK

BLE: GFSK

GSM850 TX: 824.2 ~ 848.8 MHz; RX: 869.2 ~ 893.8 MHz

PCS1900 TX: 1850.2 ~ 1909.8 MHz; RX: 1930.2 ~ 1989.8 MHz

UMTS-FDD Band V TX: 826.4 ~ 846.6 MHz; RX: 871.4 ~ 891.6 MHz

UMTS-FDD Band II TX: 1852.4 ~ 1907.6 MHz;  
RX: 1932.4 ~ 1987.6 MHz

WIFI: 802.11b/g/n(20M): 2412-2462 MHz

WIFI: 802.11n(40M): 2422-2452 MHz

Bluetooth & BLE: 2402-2480 MHz

Test Report	15070341-FCC-E
Page	7 of 27

GSM 850: 124CH  
PCS1900: 299CH  
UMTS-FDD Band V : 102CH  
UMTS-FDD Band II : 277CH  
WIFI :802.11b/g/n(20M): 11CH  
WIFI :802.11n(40M): 7CH  
Bluetooth: 79CH  
BLE: 40CH

Number of Channels:

Port: Power Port, Earphone Port, USB Port

Adapter:

Model: PC X401

Input: AC 100-240V; 50/60Hz 0.15A Max

Input Power:

Battery:

Model: BP-X401

Spec: 3.7V 1200mAh

Charging Limit Voltage:4.2V

Trade Name : Flow

GPRS/EGPRS Multi-slot class 8/10/12

FCC ID: 2ACLMX401F

## 5. Test Summary

The product was tested in accordance with the following specifications.

All testing has been performed according to below product classification:

FCC Rules	Description of Test	Result
§15.107; ANSI C63.4: 2014	AC Power Line Conducted Emissions	Compliance
§15.109; ANSI C63.4: 2014	Radiated Emissions	Compliance

### Measurement Uncertainty

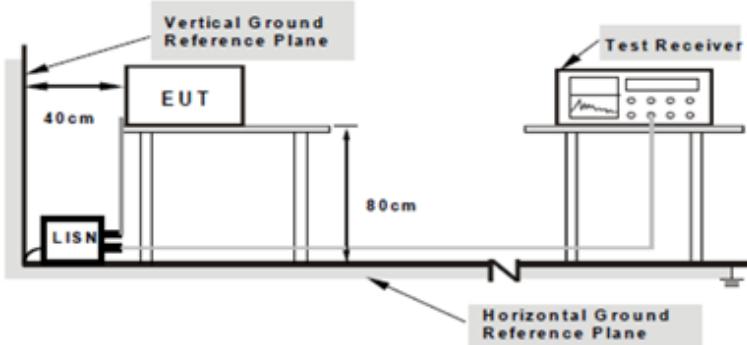
Emissions		
Test Item	Description	Uncertainty
Band Edge and Radiated Spurious Emissions	Confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2 (for EUTs < 0.5m X 0.5m X 0.5m)	+5.6dB/-4.5dB
-	-	-

## 6. Measurements, Examination And Derived Results

### 6.1 AC Power Line Conducted Emissions

Temperature	20C
Relative Humidity	52%
Atmospheric Pressure	1022mbar
Test date :	May 22, 2015
Tested By :	Lucifer He

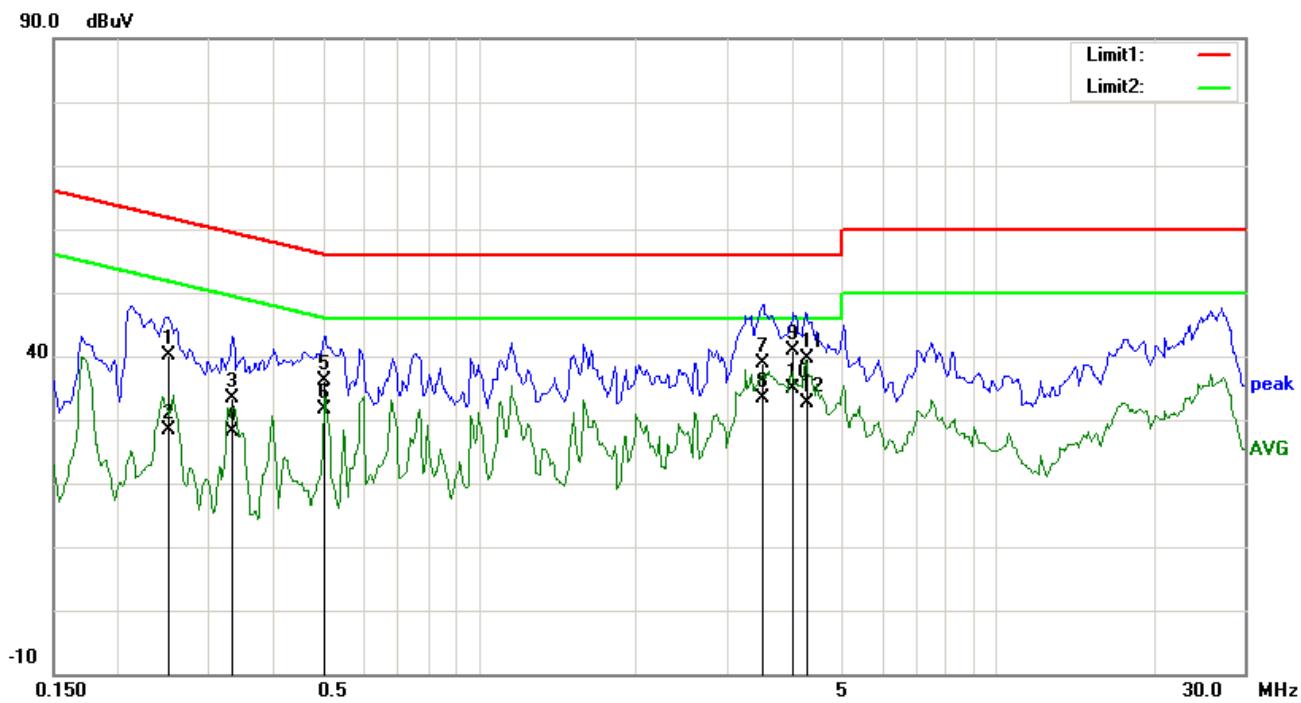
#### Requirement(s):

Spec	Item	Requirement	Applicable														
47CFR§15. 107	a)	<p>For Low-power radio-frequency devices that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 [mu] H/50 ohms line impedance stabilization network (LISN). The lower limit applies at the boundary between the frequencies ranges.</p> <table border="1"> <thead> <tr> <th rowspan="2">Frequency ranges (MHz)</th> <th colspan="2">Limit (dB<math>\mu</math>V)</th> </tr> <tr> <th>QP</th> <th>Average</th> </tr> </thead> <tbody> <tr> <td>0.15 ~ 0.5</td> <td>66 – 56</td> <td>56 – 46</td> </tr> <tr> <td>0.5 ~ 5</td> <td>56</td> <td>46</td> </tr> <tr> <td>5 ~ 30</td> <td>60</td> <td>50</td> </tr> </tbody> </table>	Frequency ranges (MHz)	Limit (dB $\mu$ V)		QP	Average	0.15 ~ 0.5	66 – 56	56 – 46	0.5 ~ 5	56	46	5 ~ 30	60	50	<input checked="" type="checkbox"/>
Frequency ranges (MHz)	Limit (dB $\mu$ V)																
	QP	Average															
0.15 ~ 0.5	66 – 56	56 – 46															
0.5 ~ 5	56	46															
5 ~ 30	60	50															
Test Setup	 <p>The diagram illustrates the test setup for conducted emissions. An EUT (Equipment Under Test) is placed on a table. A LISN (Line Impedance Stabilization Network) is connected between the EUT and the power source. A test receiver is connected to the LISN. The setup is positioned on a horizontal ground reference plane. The distance between the LISN and the EUT is 40 cm, and the distance between the LISN and the test receiver is 80 cm. A vertical ground reference plane is also indicated.</p> <p><b>Note:</b>    1. Support units were connected to second LISN.    2. Both of LISNs (AMN) are 80cm from EUT and at least 80cm from other units and other metal planes support units.</p>																
Procedure	<ol style="list-style-type: none"> <li>The EUT and supporting equipment were set up in accordance with the requirements of the standard on top of a 1.5m x 1m x 0.8m high, non-metallic table.</li> <li>The power supply for the EUT was fed through a 50W/50mH EUT LISN, connected to filtered mains.</li> </ol>																

	<ol style="list-style-type: none"> <li>3. The RF OUT of the EUT LISN was connected to the EMI test receiver via a low-loss coaxial cable.</li> <li>4. All other supporting equipment were powered separately from another main supply.</li> <li>5. The EUT was switched on and allowed to warm up to its normal operating condition.</li> <li>6. A scan was made on the NEUTRAL line (for AC mains) or Earth line (for DC power) over the required frequency range using an EMI test receiver.</li> <li>7. High peaks, relative to the limit line, The EMI test receiver was then tuned to the selected frequencies and the necessary measurements made with a receiver bandwidth setting of 10 kHz.</li> <li>8. Step 7 was then repeated for the LIVE line (for AC mains) or DC line (for DC power).</li> </ol>
Remark	
Result	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail

Test Data  Yes  N/A

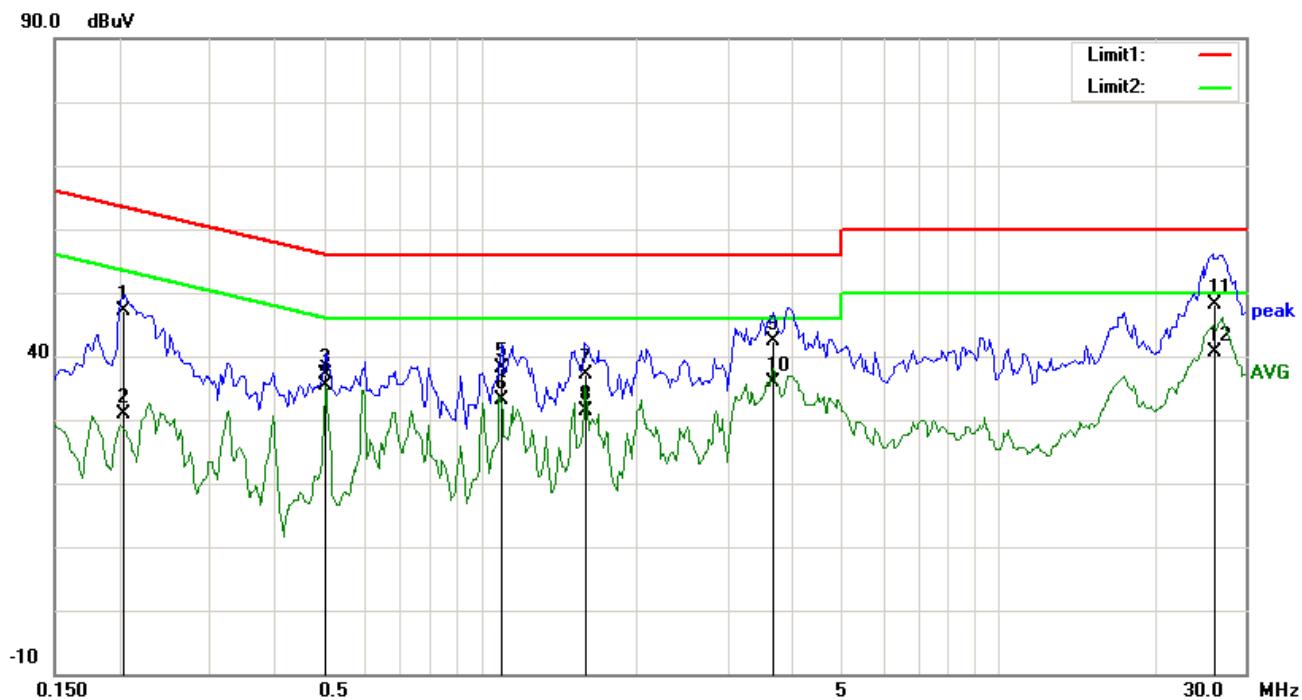
Test Plot  Yes (See below)  N/A

**Test Mode 1: USB Mode**

**Test Data**

Phase Line Plot at 120Vac, 60Hz

No.	P/L	Frequency (MHz)	Reading (dBuV)	Detector	Corrected (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Comment
1	L1	0.2516	27.33	QP	12.82	40.15	61.70	-21.55	
2	L1	0.2516	15.58	AVG	12.82	28.40	51.70	-23.30	
3	L1	0.3336	20.93	QP	12.52	33.45	59.36	-25.91	
4	L1	0.3336	15.51	AVG	12.52	28.03	49.36	-21.33	
5	L1	0.5016	24.26	QP	11.90	36.16	56.00	-19.84	
6	L1	0.5016	19.72	AVG	11.90	31.62	46.00	-14.38	
7	L1	3.5234	27.58	QP	11.40	38.98	56.00	-17.02	
8	L1	3.5234	21.92	AVG	11.40	33.32	46.00	-12.68	
9	L1	4.0352	29.60	QP	11.40	41.00	56.00	-15.00	
10	L1	4.0352	23.48	AVG	11.40	34.88	46.00	-11.12	
11	L1	4.2918	28.12	QP	11.40	39.52	56.00	-16.48	
12	L1	4.2918	21.24	AVG	11.40	32.64	46.00	-13.36	

**Test Mode 1: USB Mode**



**Test Data**

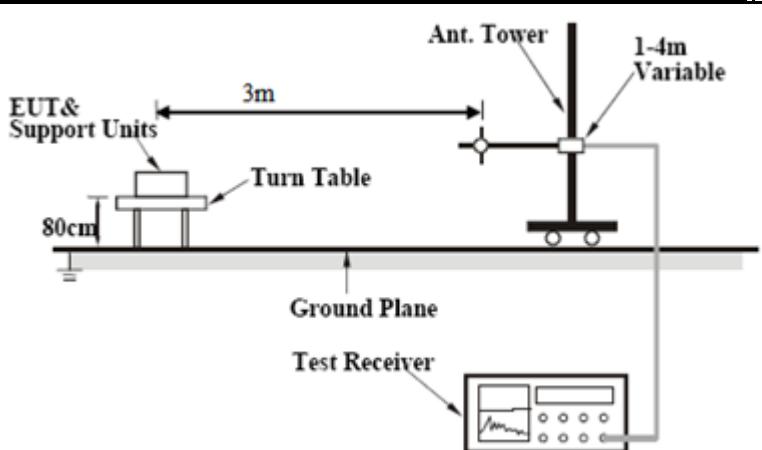
Phase Neutral Plot at 120Vac, 60Hz

No.	P/L	Frequency (MHz)	Reading (dBuV)	Detector	Corrected (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Comment
1	N	0.2047	34.18	QP	13.00	47.18	63.42	-16.24	
2	N	0.2047	17.92	AVG	13.00	30.92	53.42	-22.50	
3	N	0.5016	25.29	QP	11.90	37.19	56.00	-18.81	
4	N	0.5016	23.42	AVG	11.90	35.32	46.00	-10.68	
5	N	1.0992	26.64	QP	11.41	38.05	56.00	-17.95	
6	N	1.0992	21.71	AVG	11.41	33.12	46.00	-12.88	
7	N	1.5935	25.57	QP	11.47	37.04	56.00	-18.96	
8	N	1.5935	19.87	AVG	11.47	31.34	46.00	-14.66	
9	N	3.6680	30.56	QP	11.73	42.29	56.00	-13.71	
10	N	3.6680	24.15	AVG	11.73	35.88	46.00	-10.12	
11	N	26.1393	30.79	QP	17.43	48.22	60.00	-11.78	
12	N	26.1393	23.26	AVG	17.43	40.69	50.00	-9.31	

## 6.2 Radiated Emissions

Temperature	20°C
Relative Humidity	52%
Atmospheric Pressure	1022mbar
Test date :	May 22, 2015
Tested By :	Lucifer He

### Requirement(s):

Spec	Item	Requirement	Applicable										
47CFR§15. 107(d)	a)	<p>Except higher limit as specified elsewhere in other section, the emissions from the low-power radio-frequency devices shall not exceed the field strength levels specified in the following table and the level of any unwanted emissions shall not exceed the level of the fundamental emission. The tighter limit applies at the band edges</p> <table border="1"> <thead> <tr> <th>Frequency range (MHz)</th> <th>Field Strength (<math>\mu</math>V/m)</th> </tr> </thead> <tbody> <tr> <td>30 – 88</td> <td>100</td> </tr> <tr> <td>88 – 216</td> <td>150</td> </tr> <tr> <td>216 – 960</td> <td>200</td> </tr> <tr> <td>Above 960</td> <td>500</td> </tr> </tbody> </table>	Frequency range (MHz)	Field Strength ( $\mu$ V/m)	30 – 88	100	88 – 216	150	216 – 960	200	Above 960	500	<input checked="" type="checkbox"/>
Frequency range (MHz)	Field Strength ( $\mu$ V/m)												
30 – 88	100												
88 – 216	150												
216 – 960	200												
Above 960	500												
Test Setup		 <p>The diagram illustrates the test setup. A 'Turn Table' is positioned on a 'Ground Plane'. An 'EUT &amp; Support Units' is placed on the turn table, with a vertical distance of '80cm' indicated. A '3m' horizontal distance is marked between the EUT and a '1-4m Variable' height 'Ant. Tower'. The 'Ant. Tower' is connected to a 'Test Receiver'.</p>											
Procedure		<ol style="list-style-type: none"> <li>The EUT was switched on and allowed to warm up to its normal operating condition.</li> <li>The test was carried out at the selected frequency points obtained from the EUT characterization. Maximization of the emissions, was carried out by rotating the EUT, changing the antenna polarization, and adjusting the antenna height in the following manner:           <ol style="list-style-type: none"> <li>Vertical or horizontal polarization (whichever gave the higher emission level)</li> </ol> </li> </ol>											

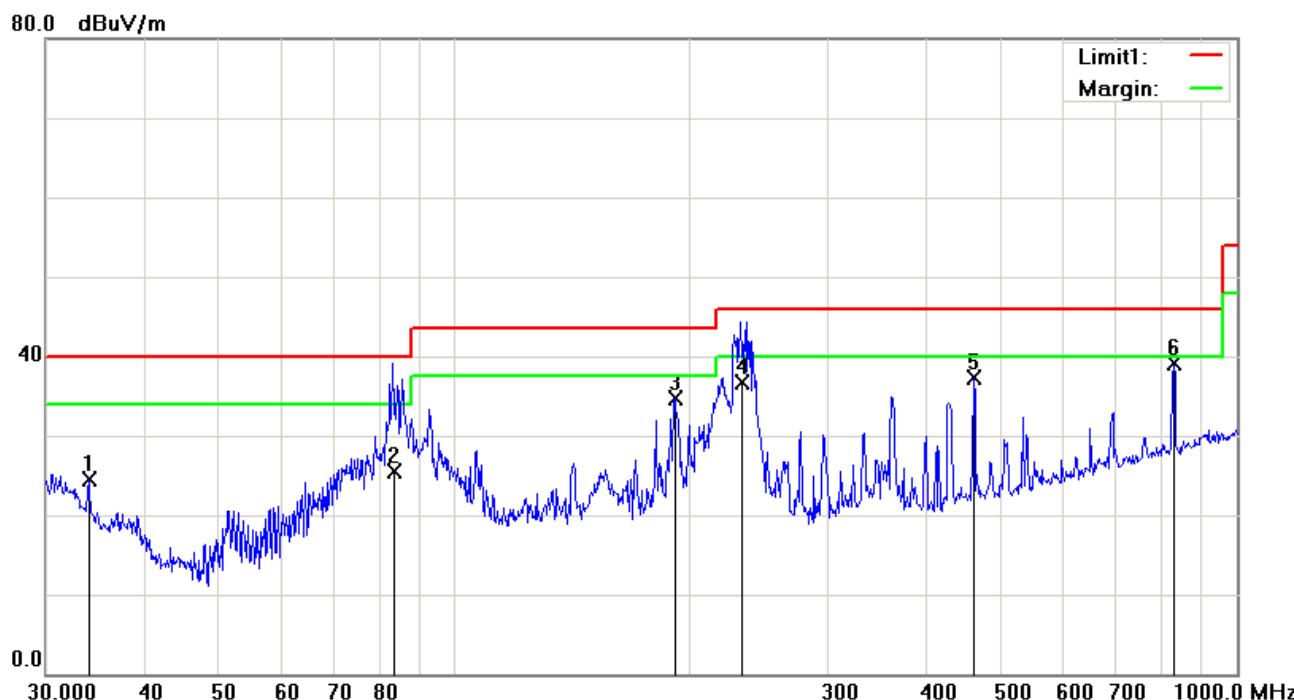
	<p>over a full rotation of the EUT) was chosen.</p> <p>b. The EUT was then rotated to the direction that gave the maximum emission.</p> <p>c. Finally, the antenna height was adjusted to the height that gave the maximum emission.</p> <p>3. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasiy Peak detection at frequency below 1GHz.</p> <p>4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz with Peak detection for Peak measurement at frequency above 1GHz.</p> <p>The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth with Peak detection for Average Measurement as below at frequency above 1GHz.</p> <ul style="list-style-type: none"> <li>■ 1 kHz (Duty cycle &lt; 98%) <input type="checkbox"/> 10 Hz (Duty cycle &gt; 98%)</li> </ul> <p>5. Steps 2 and 3 were repeated for the next frequency point, until all selected frequency points were measured.</p>
Remark	
Result	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail

**Test Data**  Yes  N/A

**Test Plot**  Yes (See below)  N/A

**Test Mode:** USB Mode

**Below 1GHz**



**Test Data**

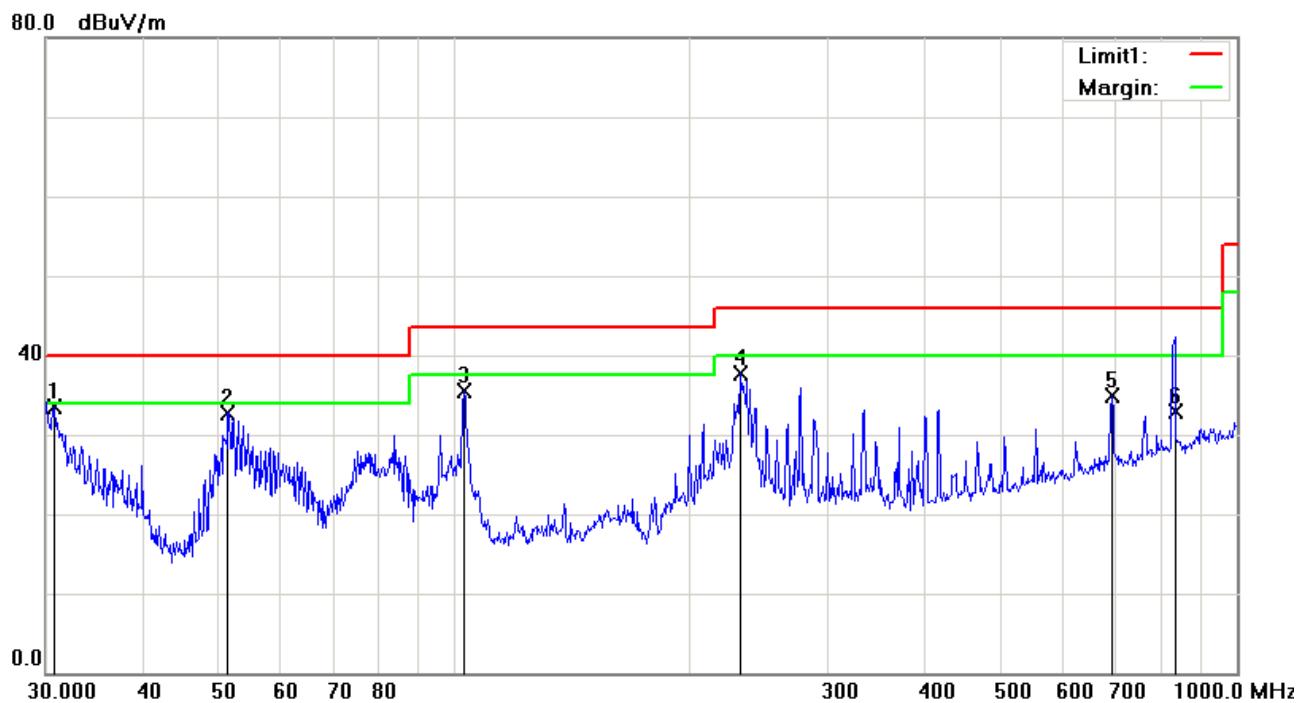
Horizontal Polarity Plot @3m

No.	P/L	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree ( )	Comment
1	H	34.0365	27.70	peak	-3.24	24.46	40.00	-15.54	100	42	
2	H	84.1001	39.00	QP	-13.55	25.45	40.00	-14.55	100	147	
3	H	191.0738	43.82	peak	-9.17	34.65	43.50	-8.85	100	252	
4	H	232.5431	45.73	QP	-9.04	36.69	46.00	-9.31	200	335	
5	H	460.7271	40.09	peak	-2.79	37.30	46.00	-8.70	100	285	
6	H	830.4002	35.53	peak	3.57	39.10	46.00	-6.90	100	173	

**Above 1GHz**

*Note: The frequency that above 1GHz is mainly from the environment noise.*

**Below 1GHz**



**Test Data**

Vertical Polarity Plot @3m

No.	P/L	Frequency (MHz)	Readin g (dBuV/ m)	Detector	Corrected (dB/m)	Result (dBuV/m )	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree ( )	Comme nt
1	V	30.7455	34.29	peak	-0.81	33.48	40.00	-6.52	100	205	
2	V	51.3005	46.04	peak	-13.33	32.71	40.00	-7.29	100	141	
3	V	102.7192	45.89	peak	-10.32	35.57	43.50	-7.93	100	239	
4	V	231.7179	46.75	peak	-9.02	37.73	46.00	-8.27	200	192	
5	V	691.9867	33.71	peak	1.28	34.99	46.00	-11.01	100	160	
6	V	832.5818	29.40	QP	3.60	33.00	46.00	-13.00	200	45	

**Above 1GHz**

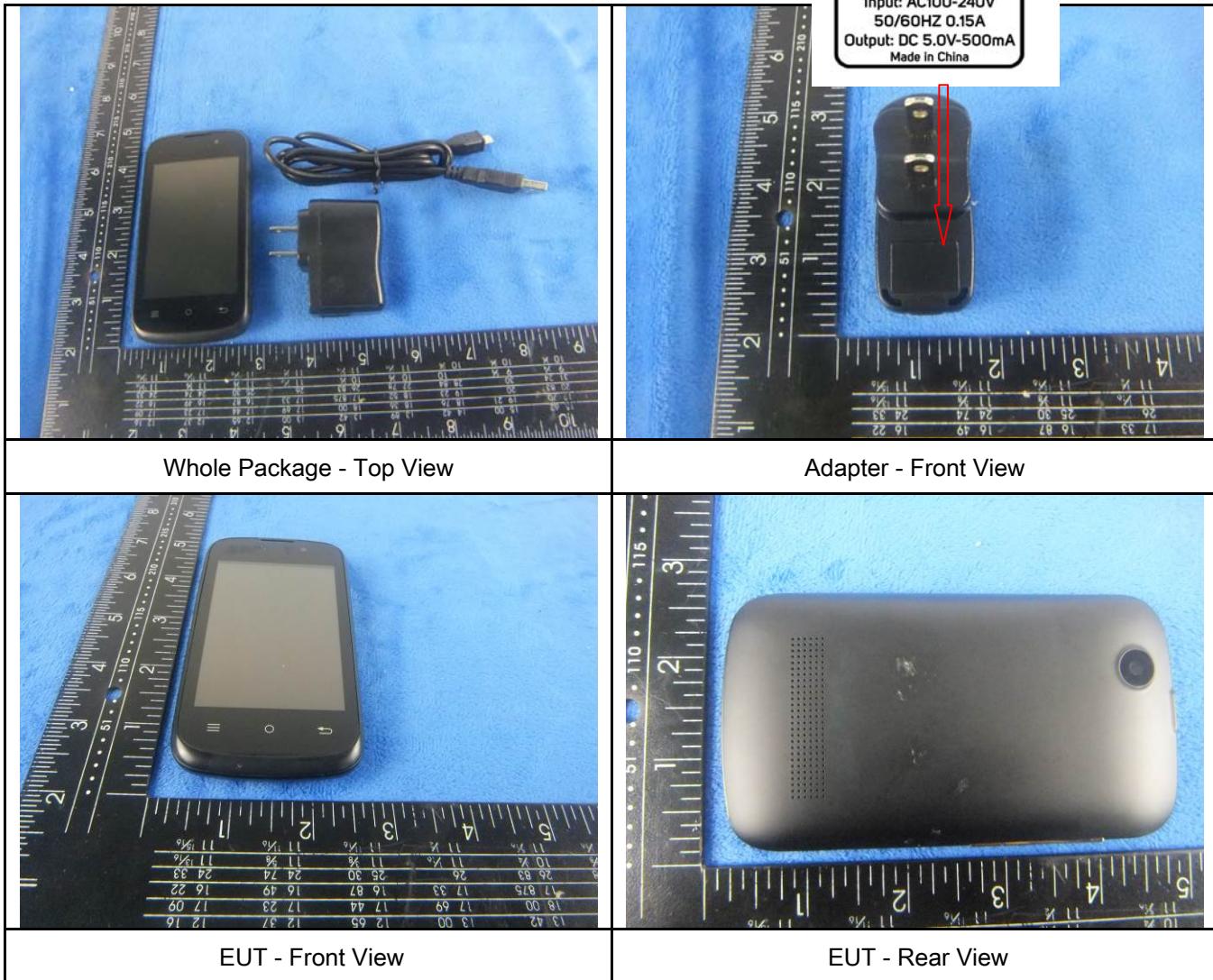
Note: The frequency that above 1GHz is mainly from the environment noise.

## Annex A. TEST INSTRUMENT

Instrument	Model	Serial #	Cal Date	Cal Due	In use
<b>AC Line Conducted Emissions</b>					
EMI test receiver	ESCS30	8471241027	09/18/2014	09/17/2015	<input checked="" type="checkbox"/>
Line Impedance Stabilization Network	LI-125A	191106	09/26/2014	09/25/2015	<input checked="" type="checkbox"/>
Line Impedance Stabilization Network	LI-125A	191107	09/26/2014	09/25/2015	<input checked="" type="checkbox"/>
LISN	ISN T800	34373	09/26/2014	09/25/2015	<input checked="" type="checkbox"/>
Transient Limiter	LIT-153	531118	09/02/2014	09/01/2015	<input checked="" type="checkbox"/>
<b>Radiated Emissions</b>					
EMI test receiver	ESL6	100262	09/18/2014	09/17/2015	<input checked="" type="checkbox"/>
OPT 010 AMPLIFIER (0.1-1300MHz)	8447E	2727A02430	09/02/2014	09/01/2015	<input checked="" type="checkbox"/>
Microwave Preamplifier (1 ~ 26.5GHz)	8449B	3008A02402	03/25/2015	03/24/2016	<input checked="" type="checkbox"/>
Bilog Antenna (30MHz~6GHz)	JB6	A110712	09/22/2014	09/21/2015	<input checked="" type="checkbox"/>
Double Ridge Horn Antenna	AH-118	71259	09/25/2014	09/24/2015	<input checked="" type="checkbox"/>

## Annex B. EUT And Test Setup Photographs

### Annex B.i. Photograph: EUT External Photo

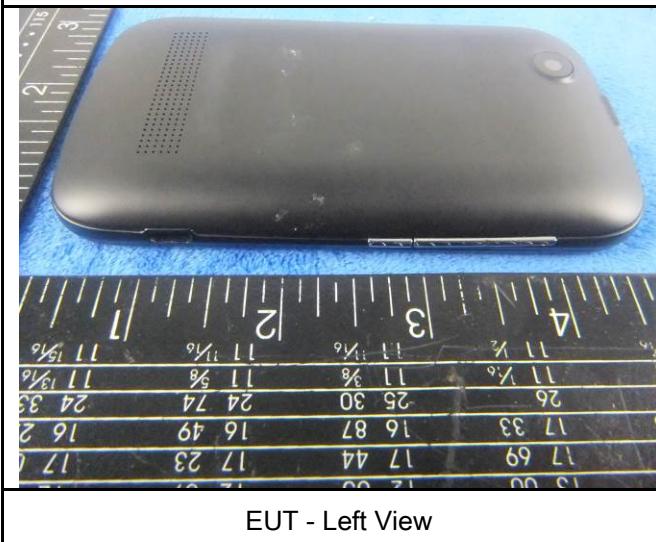




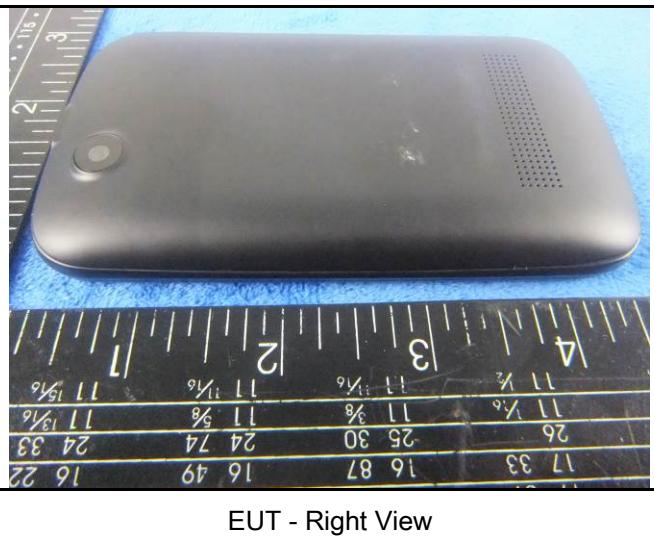
EUT - Top View



EUT - Bottom View

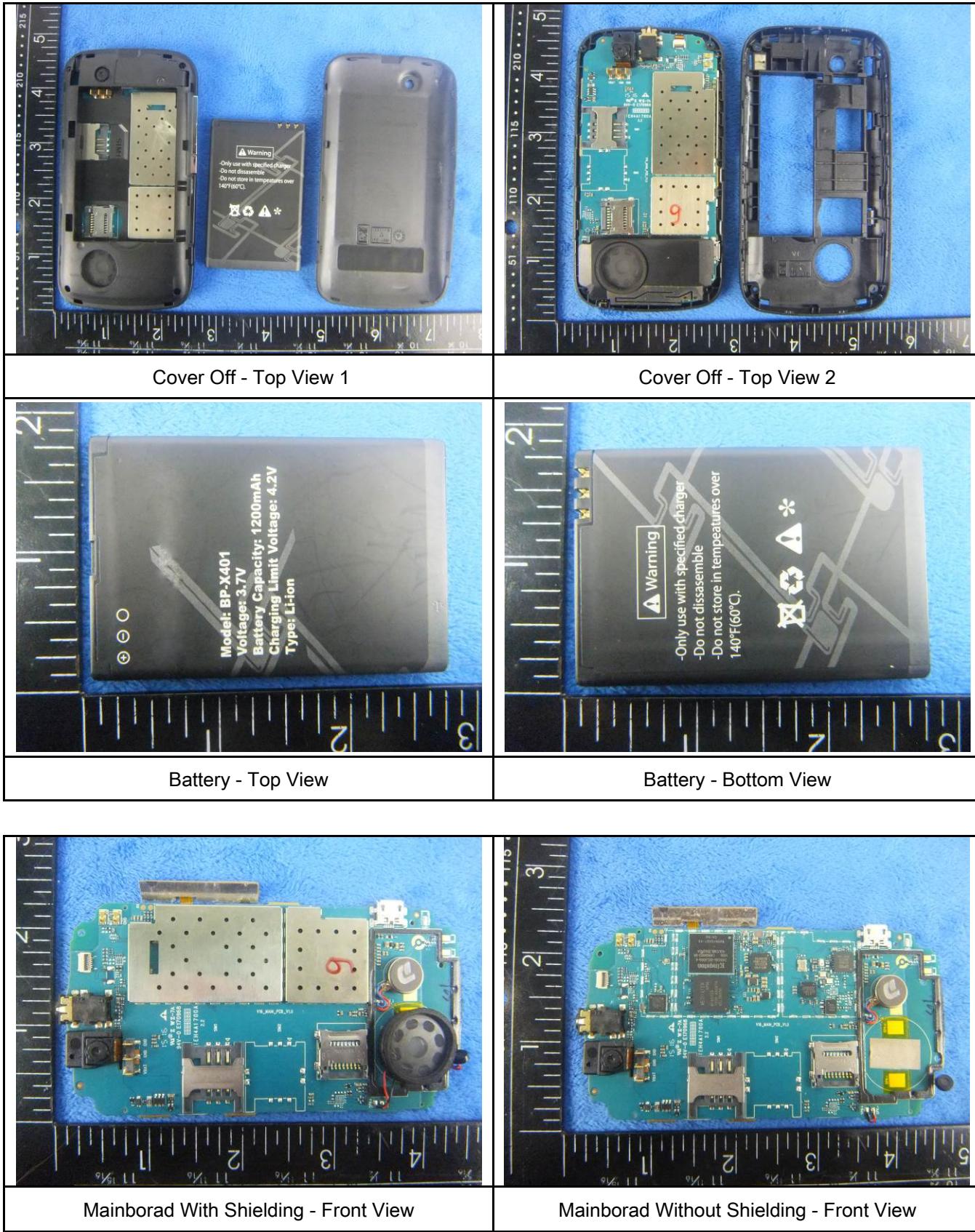


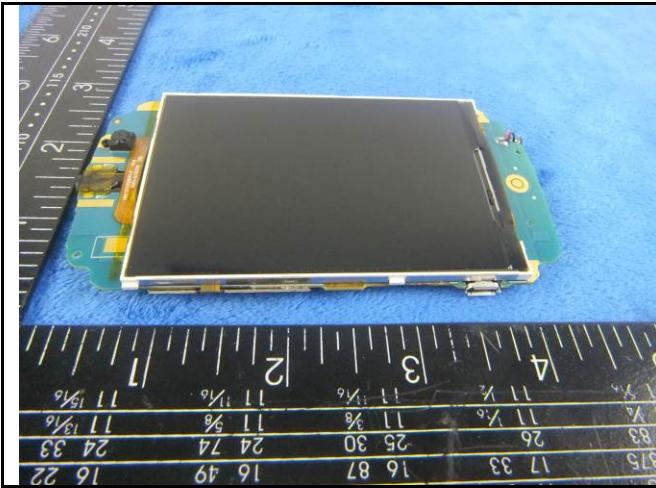
EUT - Left View



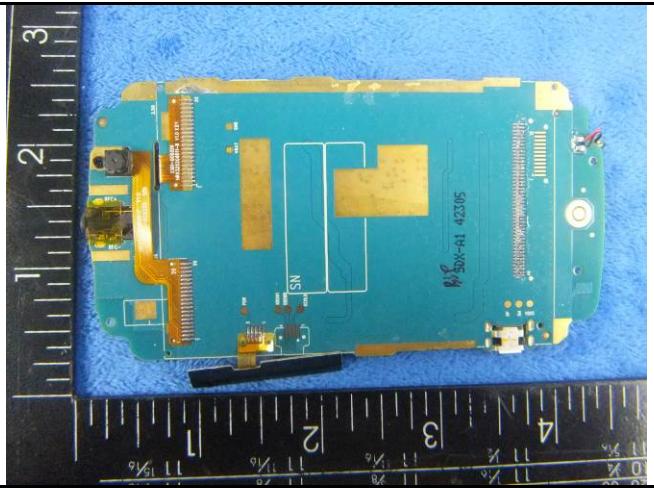
EUT - Right View

Annex B.ii. Photograph: EUT Internal Photo

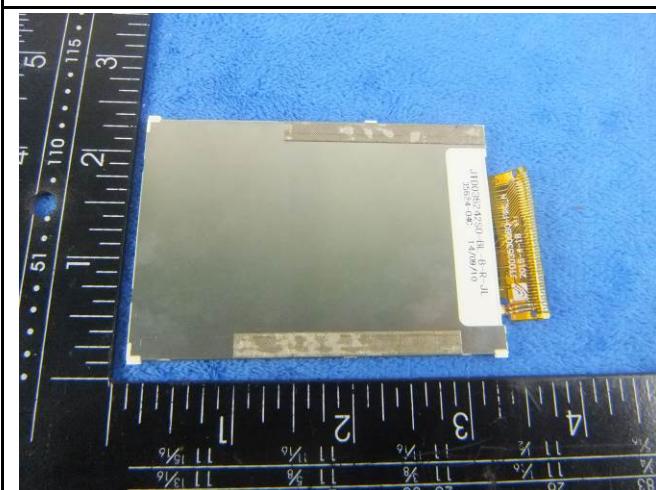




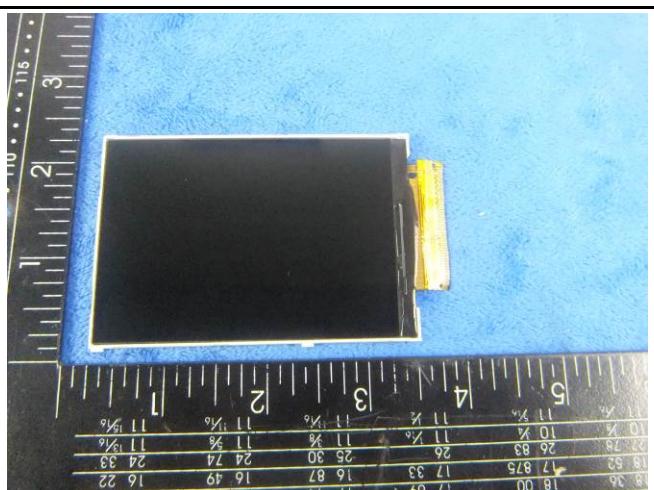
Mainborad With Shielding - Rear View



Mainborad Without Shielding - Rear View



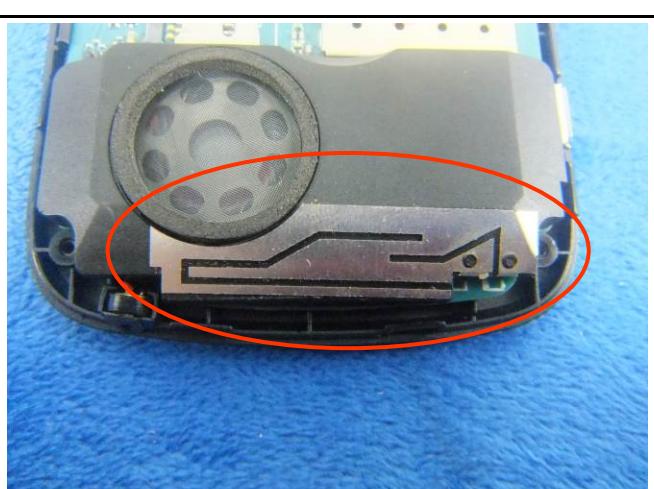
LCD - Rear View



LCD - Front View

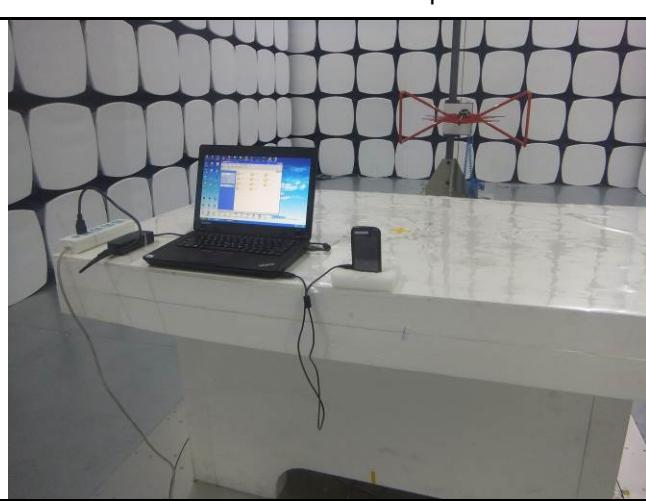
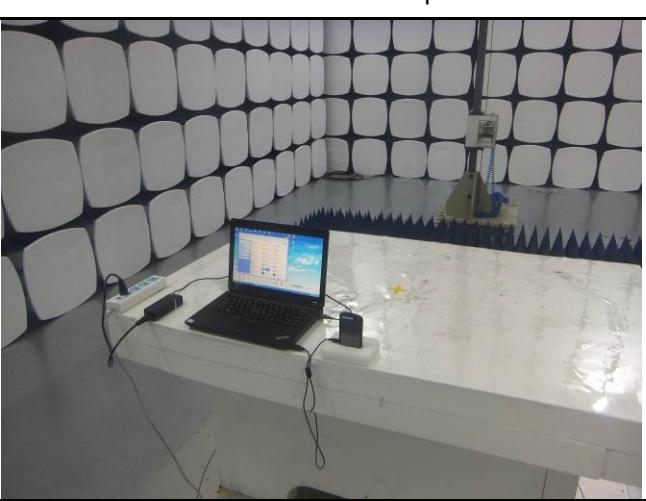


WIFI/BT/BLE - Antenna View



GSM/PCS/UMTS-FDD Antenna View

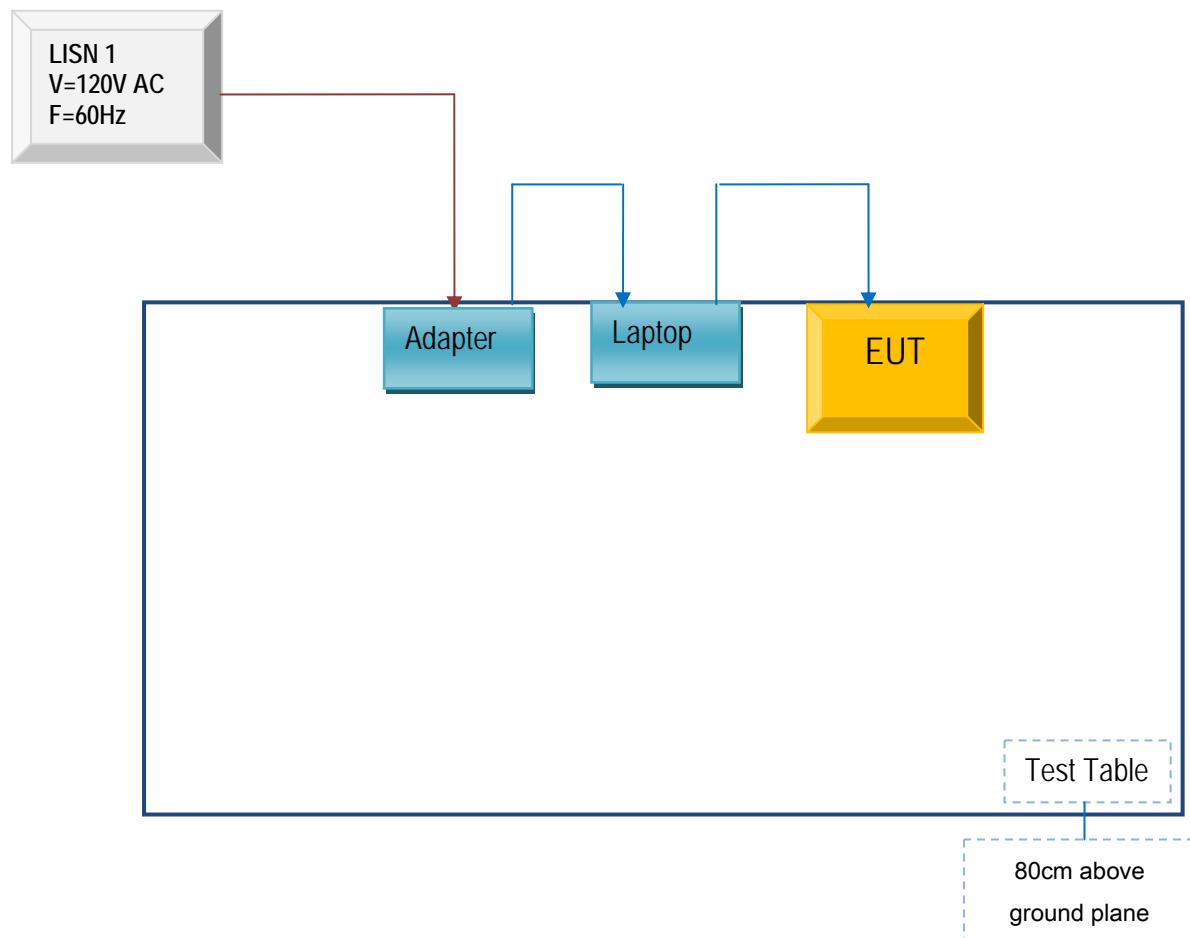
**Annex B.iii. Photograph: Test Setup Photo**

 A photograph showing a wooden table in a laboratory setting. On the table, there is a laptop, a small device on a stand, and some other electronic components. A blue power source unit with various cables is on the floor to the left. The background shows a wall with some equipment and a power strip.	 A photograph showing a side view of the conducted emissions test setup. It features a black keyboard and a mouse on a stand, connected to a laptop. The setup is on a wooden table, with a power source and cables visible on the floor.
Conducted Emissions Test Setup – Front View	Conducted Emissions Test Setup – Side View
 A photograph of a radiated spurious emissions test setup. A laptop is on a white table inside a large, rectangular, anechoic chamber. The chamber is lined with white, wedge-shaped absorbers. A red and black antenna is mounted on a stand above the laptop. A small black device is also on the table.	 A photograph of the same radiated spurious emissions test setup, but from a different angle. The laptop is on the left side of the white table, and the red and black antenna is on the right side. The chamber's absorber lining is visible in the background.
Radiated Spurious Emissions Test Setup Below 1GHz	Radiated Spurious Emissions Test Setup Above 1GHz

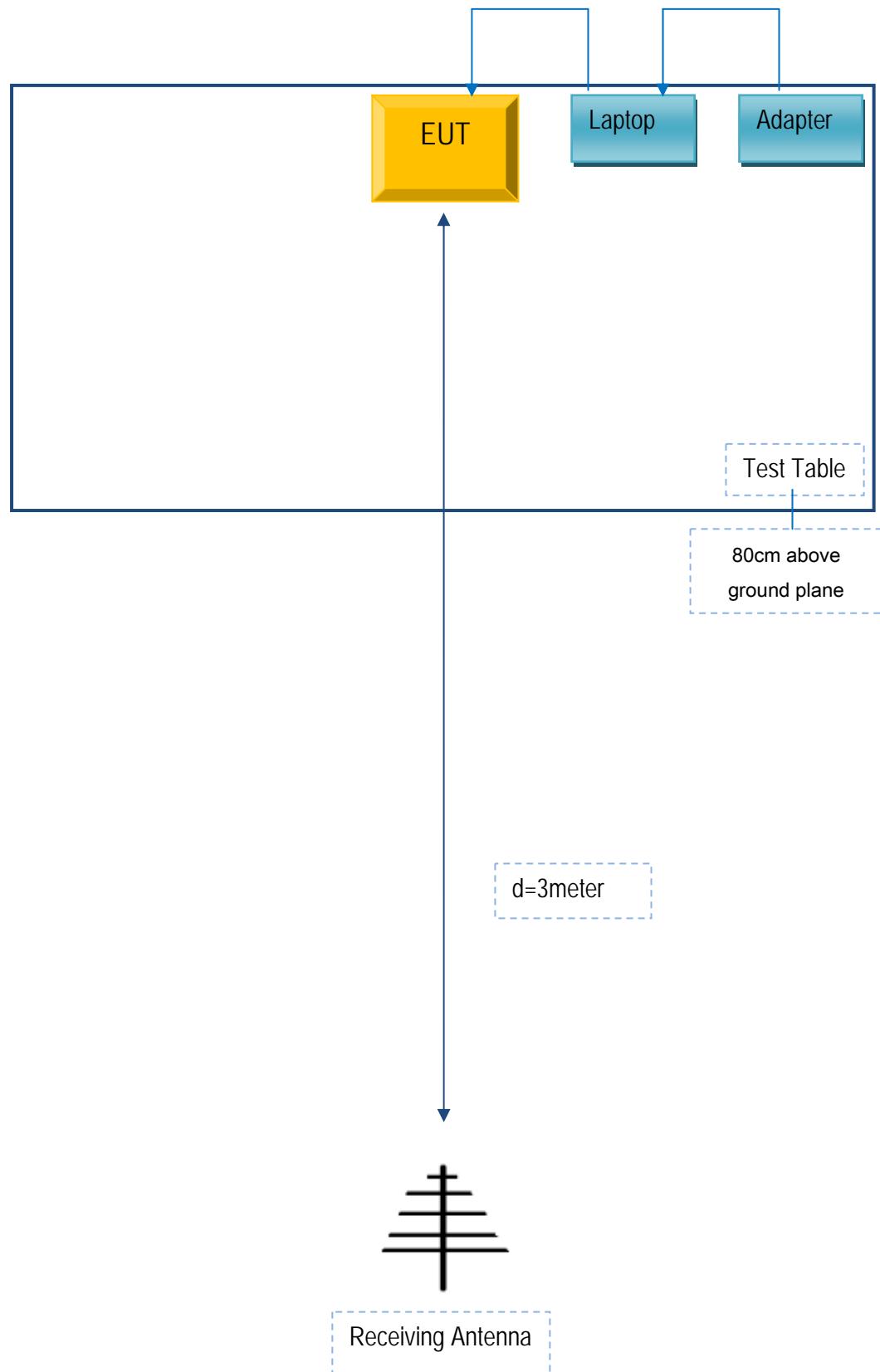
## Annex C. TEST SETUP AND SUPPORTING EQUIPMENT

### Annex C.ii. TEST SET UP BLOCK

Block Configuration Diagram for Conducted Emissions



### Block Configuration Diagram for Radiated Emissions



### Annex C. ii. SUPPORTING EQUIPMENT DESCRIPTION

The following is a description of supporting equipment and details of cables used with the EUT.

Manufacturer	Equipment Description	Model	Calibration Date	Calibration Due Date
Lenovo	Lenovo Laptop	E40& 0579A52	N/A	N/A

Test Report	15070341-FCC-E
Page	26 of 27

## Annex D. User Manual / Block Diagram / Schematics / Partlist

Please see Attachment

## Annex E. DECLARATION OF SIMILARITY

### Social Mobile Telecommunications

To: SIEMIC , 775 Montague Expressway, Milpitas, CA 95035,USA

### Declaration Letter

Dear Sir,

For our business issue and marketing requirement, we would like to list 2 model numbers on the FCC certificates and reports, as following:

Model No.: X401 ,Flow 3G

We declare that ,Flow X401 ,Flow 3G PCB ,Antenna and Appearance shape , accessories are the same . The difference of these is listed as below:

Main Model No	Serial Model No	Difference
X401	Flow 3G	Different name and color

Thank you!

Signature:



Printed name/title: Freddy Morcos/ Manager

Tel: 7866573080

Fax: 7866576508

Address: 16400 NW 2<sup>nd</sup> Ave. #201 Miami, Florida 33169